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DEVELOPMENT OF THE GOAL SETTING SKILLS SCALE FOR PRIMARY SCHOOL STUDENTS: ITS VALIDITY AND RELIABILITY ACROSS TIME

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Abstract

This study is a scale development study aimed at determining the goal setting skills of primary school students. The scale, which was developed to determine the goal setting skills of the students who are studying at the 4th and 5th grade levels of primary education, consists of items in a way that students can make self-evaluation about their goal setting skills. This scale development study was conducted with two study groups. The validity and reliability analysis of the first study data in 2014 showed that the scale has a two-factorial structure. Validity and reliability analyses performed on the data collected in 2019 once again revealed that this structure was valid and reliable, independent of time. The two structures revealed by the scale were determined to measure the goal decision making skills and the goal-directed process management skills, and the reliability coefficient is .78 and .80 (workgroup 1) and .67 and .78 (workgroup 2), respectively.

Keywords: Goal setting, goal setting skills, primary school, scale development.

INTRODUCTION

Apart from being motivation tools that lead people to success, goals are like road maps and signs that enable people to add value and meaning to their lives. People who have achieved socially accepted accomplishments in the world demonstrate common characteristics, namely the act of setting a predetermined goal and making the necessary efforts to achieve this goal (Adair, 2017; Baltaş, 2020; Covey, 2014; Goleman, 2008; Lent, 2019; Locke & Latham, 2018; Schunk, 1985). According to Eric Fromm, the most important of the strengths that individuals consider while living their lives and making plans for their future is to have an interest area and goal acquisition. Therefore, each goal helps people work toward a greater connectivity with others and motivation for life. According to Maslow, the individual wants to realize himself and achieve psychological satisfaction after meeting his basic needs. Self-realization is defined as the desire and effort of an individual to reach a certain point and attain his goals by using his own talents and skills (Cloninger, 1993, as cited in Erden & Akman, 1995).

Goals express the wishes and desires of people: they represent what they want to achieve in life. Besides, the goals point out the expectations for the future, but also the expectations that express the results one tries to reach or maintain, that guide one's behavior and choices, and that is closely related to the personality. In this respect, personal goals are one of the distinctive features that distinguish the individual from others (Diener & Lucas, 2000). From this point of view, it is understood that goals also express the meaning that the person attributes to the goal and how this meaning affects the life of the person.

When examining the studies in the field of goal setting, it is striking that there are different theories in this field. The theory that has the most comprehensive explanation of the definition, selection, and organization of the goal is the Goal Setting Theory (Locke & Latham, 1979) developed by Locke and Latham in 1979. The Goal Setting Theory was developed based on empirical research that lasted for nearly 40 years. This research, which includes about 40 laboratory and field studies, was based on the simplest observations of inner processes by assuming that conscious human behavior is purposeful (Locke & Latham, 1990; 2004; 2006). In other words, Goal Setting Theory describes a conscious goal selection and regulation process. Latham and Locke (1979) found goal setting to be the main mechanism among various others that affects one's internal and external motivation.

Research on goal setting shows that it affects performance and increases individual's success (Conrad, Doering, Rief, W. & Exner, 2010; Klung & Maier, 2015; Koestner, 2008; Lent & Souverijn, 2020; Moeller et al., 2012; Schunk, 2001). Goals direct one's efforts and emotions; in other words, the difficulty and value of a goal affect one's intensity of efforts put forth to achieve it. Therefore, when one attains the goal, the following success will be more (Locke & Latham, 2006). Moreover, the level of one's goal-setting skill is highly related to one's social, economic, and professional achievements. In this respect, Schunk (1985) found that one's involvement in goal setting encouraged one to find new strategies in order to attain the goal. Additionally, studies showed that the compliance of the individual's personal goals with their psychological needs and inner motives affects their subjective wellbeing (Job et al., 2009). Thus, having meaningful and important goals and moving towards these goals have an essential role in maintaining and enhancing the subjective wellbeing of the individual.

Each goal is an integration of cognitive, emotional, and behavioral elements. The cognitive element of the goal is related to the mental representation of the goal, the creation of the goal hierarchy, and the determination of the paths to the goal. The emotional element of the goal is the emotional responses that integrate with the goal. The behavior matter includes actions that integrate with the plan to achieve the goal (Locke & Latham, 2018). An individual's awareness of these different aspects of goals, which actually helps to form goal-setting skills, affects the processes of setting, regulating, and attaining goals. Locke and Latham (2004) state that goals set by using goal-setting skills lead to higher task performance than an uncertain goal, such as a particularly challenging one. Research shows that it is much more possible to attain the intended goals if they are realistic, specific, measurable, and challenging, but do not exceed the individual's capacity (Conrad et al., 2010; Dornyei, 2001; Pintrich & Schunk, 2002).

The development of goal-setting skills at an early age is almost a prerequisite for individuals to have a healthy wellbeing and a successful, high-saturated life. In a study conducted at Yale University in 1953, the students were asked whether they had a clear and written goal to achieve and whether they determined how to achieve this goal step by step. Only 3% of the students pointed out their goals clearly, while the other 97% did not specify a clear goal. Approximately 20 years later, the same participants were compared in terms of social and economic status and profession. It was revealed that the 3% group, who had clarified their goals in their minds and could write them down on paper, were more successful socially and economically than the 97% group (Robbins, 2007). The results of this study show how individuals whose goal-setting skills are developed at an early age can have a significant impact on their future lives. From this point of view, for individuals to add meaning to their lives, they must have some personal goals and prepare themselves for all the difficulties they may encounter in reaching their goals. Moreover, there are studies that support the claim that setting goals increases student performance (Clark, 2020; Lent, 2019; Travers et al., 2015; Umashankar, 2020). In conclusion, it is very important for individuals to acquire this skill at an early age in their lives.

Primary education is not only important for children's cognitive, social, emotional, and personal development, but also for attaining the goal-setting skills they will continue to need in their own life adventures. This is because goal-setting skills are related to students' ability to plan their own learning, set their own learning responsibilities, and determine their own learning goals as well as

their performance goals. However, when the curriculum at primary education is examined, it is obvious that the development of these skills is not given much importance in basic education (MEB, 2005). In a research study conducted to examine the goal-setting level of students in elementary school (Erişen et al., 2014), the teachers stated that the majority of students could not acquire these skills at the primary school level.

The number of related studies in Turkey is limited. In this respect, it is necessary to carry out studies about goal-setting skills in order to see the needs and requirements of students regarding these skills. In addition, concerning the goal-setting scale development or scale adaptation to Turkish, a few studies exist, but they are generally limited to higher education, business life, and sports (Ağbuğa 2014; Arslan et al., 2018; Aslan & Gelişli, 2015; Bakioğlu & Eraslan-Çapan, 2015; Doğan et al., 2017; Kahleoğulları, 2017; Korkmaz & Kırdök 2019; Şenel &Yıldız, 2016). Most importantly, a scale development or adaptation that measures the goal-setting skills of primary school students has not been encountered in the literature. In order to evaluate and monitor students' progress regarding goal-setting skills and to develop training programs accordingly, a scale development study for measuring these skills is crucial. In light of this information, this study aimed to develop a scale that will determine the goal-setting skills of primary school students and to examine its validity and reliability across time.

METHOD

Study Groups

The research consists of two study groups. The data in the first study group were collected from 125 4th grade students attending a primary school in Üsküdar District National Education Directorate in the 2014-2015 academic year. However, the data of 120 students who filled the scale were included in the analysis. In the second study group, data were collected from 232 students who were studying in different districts of Istanbul in the primary school in 2019 academic year, but analyses were made on the data of 226 students. Of the students in the second group, 110 were 4th grade students and 122 were 5th grade students. Convenience sampling method was used to select the participants in both study groups. Convenience sampling method is one of the non-probability sampling methods that includes people who can be reached in the conditions and situations that exist for the study to be conducted and is preferred when there is not enough time and facilities (Cohen, Manion, & Morrison, 2007; Lodico, Spaulding, & Voegtle, 2010). In this regard, due to the difficulty of using probable sampling methods in all schools in Istanbul, convenience sampling was used in the research.

Scale Development Process

1-Creating the item pool. A questionnaire form has been prepared in order to create the items of the scale in order to measure students' goal setting skills. This form, which consists of open-ended questions, is a form consisting of 10 questions that students can convey their opinions about goal setting. The survey was applied to a 16 4th grade students. In addition, six teachers were interviewed about the students' goal setting skills and the development of these skills. The data from the survey and interviews were analysed through content analysis and interpreted within the context of students' goal setting skills. In addition, while creating an item pool, periodicals, books, and various scales applied abroad related to goal setting skills were also examined. As a result of the literature review and content analysis of the data arising from the survey, a total of 44 positive and negative items related to the skill to be measured were written. The scale is rated according to 4-point likert. The students were asked to read each item on the scale and make self-assessment according to the four degrees. The four degrees specified are as follows: (1) Doesn't Similar to Me, (2) A Little Similar to Me, (3) Similar to Me, (4) Very Similar to Me.

2-Evaluation of the items by experts. For the content validity of the scale, expert opinion was consulted to evaluate to what extent the items were suitable for the aim of the scale and representative of goal setting skills. Accordingly, the scale was sent to 12 classroom teachers, 8 experts in guidance

and psychological counselling, 4 experts in curriculum development and 2 experts in assessment and evaluation, and. In order to evaluate the items in terms of spelling and grammar rules and expression disorder, experts working in the field of Turkish Language and Literature were also consulted. In this process, all experts were asked to make a score between 1 and 3 (1 = absolutely not suitable, 2 = appropriate but needs to be changed, 3 = exactly appropriate) in order to evaluate items. An expert evaluation form was prepared by leaving an appropriate space for comments and suggestions next to each item, and the forms were sent to the experts via e-mail. The necessary adjustments were made in line with the feedback received from the experts, and 4 items were removed from the scale.

3-Pilot implementation. After the draft form of the scale was formed, a pilot study was carried out in order to ensure that students can understand the items clearly and to determine the average duration of administration. This implementation was conducted with a group of 35 students by an educator. According to the feedback from the participants and the educator, necessary arrangements were made. Finally, the draft form of the scale has become ready to be applied as a paper and pencil scale with a total of 40 items, 21 of which were negative and 19 were positive.

4-Implementation. The implementation was carried out in two ways. The first implementation was carried out in 2014, and the second in 2019. The aim was to ensure the validity of the scale across time. The necessary information was given to the students to fill the scale before the implementation and their participation in the study was provided on a voluntary basis. The implementation was made by giving a lesson time to each class, and it was ensured that the students were not affected by each other as much as possible. In the analysis of the data, the scales that seemed to be filled carelessly or mostly left blank were determined and removed from the data set.

Study group 1: First study was conducted with the permission from the Primary School Directorate in Üsküdar District Directorate of National Education in 2014-2015 Spring Semester. The scale was administered to 125 4th grade students in the school. Then, the completed forms were examined, 5 forms that were filled incorrectly and incompletely were removed, and data belonging to 120 forms were analysed.

Study group 2: It was conducted in 2019-2020 Fall Semester with the permission of the Primary School Directorate in Üsküdar District National Education Directorate. A total of 232 4th and 5th grade students were participated in the Study Group 2. After the implementation, the completed forms were examined. 8 forms that were filled in incorrectly and incompletely were removed, and the analysis was made *by* entering the data of 226 forms in total.

Data Analysis

Validity Analysis

Explanatory and confirmatory factor analysis was performed for construct validity. According to Explanatory Factor Analysis (EFA) results for the Study Group 1, the factorial structure of the scale was determined. Confirmatory Factor Analysis (CFA) was carried out with in order to test the validity of the structure revealed by EFA. LISREL 8.54 program was used for CFA. In CFA, many fit index values are used to evaluate the harmony between the theoretical model and raw data: Chi-Square Goodness Test, Goodness of Fit Index (GFI), and Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Root Mean Square Residuals (RMR or RMS) and Root Mean Square Error (Root Mean) Square Error of Approximation, RMSEA) (Büyüköztürk, Akgün, Özkahveci, & Demirel, 2004). In order to reveal the validity of the model across time, CFA was carried with the data obtained from Study Group 2. For this purpose, fit indices obtained from CFA were taken into account.

Reliability Analysis

For this purpose, the Cronbach-α reliability coefficients and item-total correlation values of item for each dimension of the model created by EFA and CFA were examined. In addition, lower-upper group t-test results were analysed for the discrimination of each item.

RESULTS

Explanatory Factor Analysis (EFA)

EFA was performed for the construct validity of the scale. EFA is a statistical analysis of data used for reducing large number of variables into fewer factors underlying these variables. It aims to determine minimum number of factors that account for covariation among variables. In factor analysis, the conceptual structure measured by variables collected from a certain group was defined based on the factor loading values (Büyüköztürk et al., 2011). For this purpose, Principal Component Analysis, one of the factor analysis techniques, was used in this study. KMO coefficient and Bartlett Sphericity Test results obtained from EFA are given in Table 1, and KMO coefficient (.707) value higher than .60 and significant Bartlett Test result ($p<.05$) showed that the data are suitable for factor analysis.

Table 1. KMO Coefficient, and Bartlett Test results

KMO Coefficient		.707
Bartlett Test Results	X^2	524.398
	df	136
	Sig.	.000

EFA results yielded two factors. In order to decide on which factors the items were loaded and which items would remain in the scale, the magnitude of the factor loading values were initially taken into account. It is stated that the factor loading between .30, .59 indicates medium and above .60 indicates a high level relationship (Büyüköztürk et al., 2011). The lowest acceptable level for each variable is .32 (Tabachnick & Fidell, 2001). In the study, the value of .32 was determined as the lower limit and items with a load below this value were excluded from the analysis. Then, it was checked if there were variables loaded on both factors. For these overlapping variables, the difference between the highest two factor loading values should be at least .10 (Büyüköztürk et al., 2011). Such items were also removed from the scale. As a result, items no 1, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 18, 22, 23, 25, 26, 28, 30, 31, 32, 35 and 39 were removed from the scale. Analyzes were repeated after each item removal, and the factor eigenvalues of the final form of the 17-item scale are presented in Table 2.

Table 2. Eigenvalues of the formed factors and explained variance ratios

Factor	Eigenvalues	Explained Variance %	Cumulative %
1	3.709	21.819	21.819
2	3.187	18.746	40.565

The variance rate explained by the final 2-factor scale is 41%. 22% of this variance was explained by the first factor and 19% by the second factor. Items and factor loadings of the obtained factors are presented in Table 3.

As seen from Table 3, factor loads vary between .38-.77. Factor 1 consists of 7 items, factor 2 consists of 10 items. When the items that make up the first factor were examined, it was found that these items were related to "Deciding on the Goal" and the items in the other factor were about "Managing the Goal-Oriented Process" skills.

Table 3. Item factor loads

Item Number	Factor 1 Deciding on the Goal	Factor 2 Managing the Goal-Oriented Process
I 20	**.756**	.030
I 19	**.725**	.113
I 37	**.671**	-.133
I 24	**.670**	.045
I 21	**.652**	.123
I 36	**.580**	-.103
I 17	**.526**	-.030

I 33	-.121	**.774**
I 34	-.086	**.715**
I 39	-.054	**.684**
I 12	-.010	**.682**
I 40	-.182	**.597**
I 2	.039	**.578**
I 29	.276	**.550**
I 27	.048	**.496**
I 3	.118	**.472**
I 5	.011	**.378**

Confirmatory Factor Analysis (CFA)

DFA was conducted with the data obtained from both Study Group 1 and Study Group 2 in order to test the construct validity of the two-factor model resulting from EFA. The two-factor model shown in Figure 1 has been tested for both groups through the LISREL 8.54 program, and the fit indices obtained for Study Group 1 are given in Table 4, and the values obtained for Study Group 2 are given in Table 5.

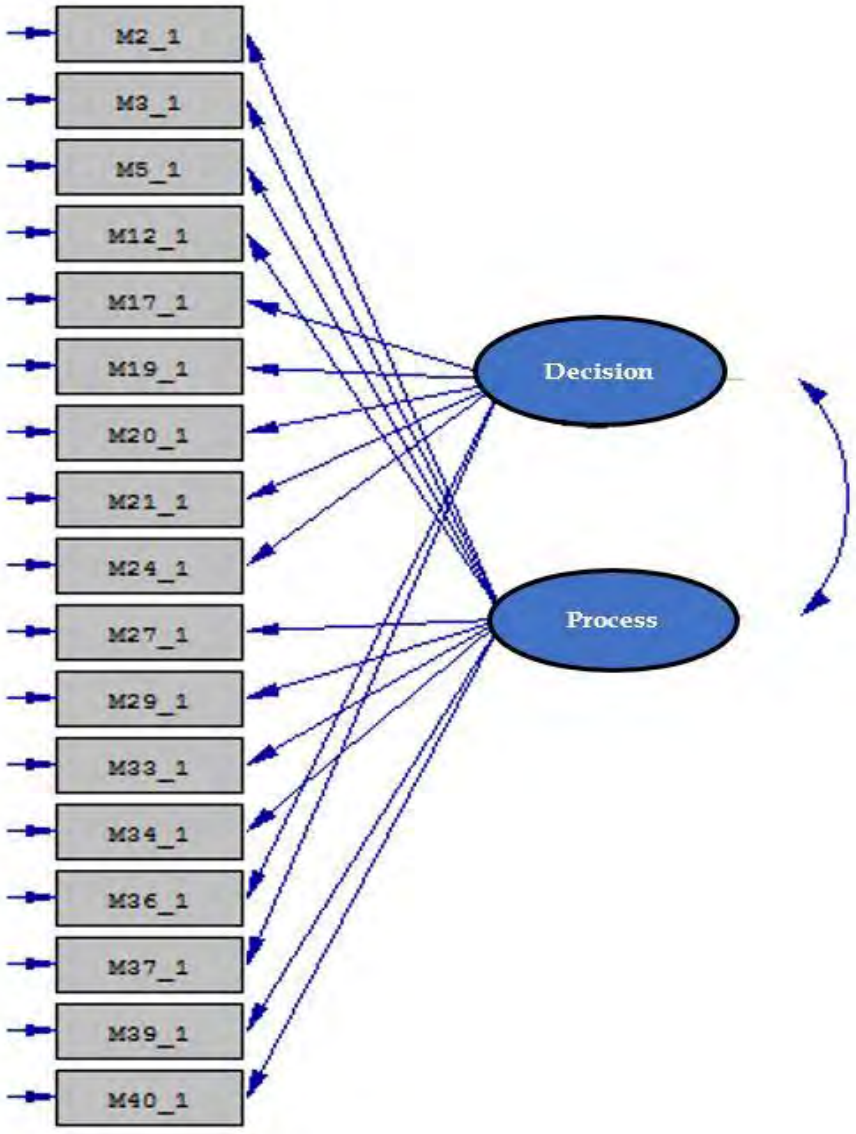

Figure 1. Goal setting scale measurement model

Table 4. Acceptance limits of CFA fit index values and fit indices of Study Group 1 data

Fit Indices	Perfect Fit Values	Acceptable Fit Values[1]	Fit Value Obtained from the Scale	Degree of fit
χ2 (p)	-	-	175.50 (p<.05)	-
sd	-	-	115	-
χ2/sd	0≤ χ2 / df≤ 2	≤ 5[a]	1.526	Perfect Fit
RMSEA	.00≤RMSEA≤.05	≤.08[b]	.061	Good Fit
SRMR	.00≤SRMR≤.05	≤.08[b]	.083	Poor Fit
GFI	.95≤GFI≤1.00	≥.90[c]	.86	Acceptable Fit
AGFI	.95≤AGFI≤1.00	≥.90[c]	.81	Poor Fit
CFI	.95≤CFI≤1.00	≥.90[b]	.92	Good Fit
IFI	.95≤IFI≤1.00	≥.90 [b]	.92	Good Fit
NNFI	.95≤NNFI≤1.00	≥.90[b]	.90	Good Fit

[1] [a] Bollen (1989), Sümer (2000); [b] Byrne (1998), Hu & Bentler (1999), Sümer (2000), Tabachnick and Fidell (2001); [c] Hooper, Coughlan and Mullen (2008), Sümer (2000)

When the fit indices obtained from Study Group 1 data were examined, it was seen that except for AGFI and SRMR, the other indices supported the perfect or good fit of two-factor scale structure to data. Since AGFI and SRMR values are sensitive to sampling, it is recommended not to be used alone in evaluating the fit of the model (Hooper, Coughlan, & Mullen, 2008). Accordingly, the value obtained from the ratio of the chi-square value to the degrees of freedom is less than 2, the RMSEA = .061 value is less than .08, the CFI = .92, IFI = .92 and NNFI = .90 values are greater than .90, and the GFI If the value of = .86 is close to the .90 value. These values indicate that the model has a good fit. As a result, when the index values are considered together, it is confirmed that the model fits well with the 2-factorial structure, in other words, the 2-factor scale is acceptable.

Table 5. The acceptance limits of CFA fit index values and fit indices of Study Group 2 data

Fit Indices	Perfect Fit Values	Acceptable Fit Values[1]	Fit Value Obtained from the Scale	Degree of fit
χ2 (p)	-	-	181.77 (p < .05)	-
sd	-	-	113	-
χ2/sd	0≤ χ2 / df≤ 2	≤ 5[a]	1.609	Perfect Fit
RMSEA	.00≤RMSEA≤.05	≤.08[b]	.048	Perfect Fit
SRMR	.00≤SRMR≤.05	≤.08[b]	.062	Good Fit
GFI	.95≤GFI≤1.00	≥.90[c]	.92	Good Fit
AGFI	.95≤AGFI≤1.00	≥.90[c]	.89	Good Fit
CFI	.95≤CFI≤1.00	≥.90[b]	.95	Perfect Fit
IFI	.95≤IFI≤1.00	≥.90 [b]	.95	Perfect Fit
NNFI	.95≤NNFI≤1.00	≥.90[b]	.94	Good Fit

[1] [a] Bollen (1989), Sümer (2000); [b] Byrne (1998), Hu & Bentler (1999), Sümer (2000), Tabachnick & Fidell (2001); [c] Hooper, Coughlan & Mullen (2008), Sümer (2000)

Moreover, according to the CFA fit index values given in Table 5, the data obtained from the Study Group 2 fit the model better. The ratio of the chi-square value to the degree of freedom, RMSEA, CFI and IFI values indicate perfect fit of data to the two-factor model while SRMR, GFI, AGFI and NNFI values showed a good fit.

Reliability Analysis of the Scale

In order for the internal consistency of the scale, first of all, item total correlations, which indicates whether each skill item is related to the dimension desired to be measured, were examined. In this regard, the correlation between the students' responses in each item and the total score obtained by excluding the relevant item was examined. Afterwards, the mean scores obtained by the lower and upper groups were compared for each item. For this purpose, the total score students received from each subscale was ranked in descending order, and the first 27% constituted the upper group and the lower 27% formed the lower group. The mean scores of the upper group and the mean scores of the lower group for each item were compared by independent samples t-test. The item analysis results are given in Table 6.

Table 6. The corrected ıtem-total correlations of the factors and the uncorrelated T-test results between the upper 27% and lower 27% scores

Factor Name	Item Number	Corrected Item-Total Correlation	t (upper%27-lower%27)
Deciding on the Goal	I 20	.614	7.892
	I 19	.586	13.754
	I 21	.548	10.095
	I 37	.508	8.286
	I 24	.503	8.907
	I 36	.453	6.894
	I 17	.366	7.267
Managing the Goal-Oriented Process	I 33	.645	8.519
	I 34	.615	7.070
	I 12	.567	7.723
	I 39	.537	10.146
	I 40	.493	7243
	I 2	.480	6.889
	I 29	.437	7.744
	I 27	.400	5.304
	I 3	.392	6.280
	I 5	.284	3.681

Accordingly, the corrected item-total correlation values range from .57 to .23. The criterion for item-total correlation is to be greater than .30. If it is between .20 and .30, item can be kept by revising it but if it is below .20, item should be removed from the scale. When the table was examined, only the item total correlation for Item 5 (.28) was less than .30. Since this item is a theoretically important item, it was revised and kept in the scale. The results of the independent sample t-test in Table 6 showed that there is a significant difference between the mean scores of the upper 27% and the lower 27% group. This situation showed that the items of the scale are distinctive in terms of having the relevant skill. After these processes, the Cronbach's Alpha coefficient was calculated. This value is expected to be greater than .70. The reliability coefficients calculated for the entire scale and its sub-scales and for both Study Group 1 and Study Group 2 data are shown in Table 7.

Table 7. Reliability coefficients of the scale and ıts sub-dimensions

	Cronbach Alpha Coefficient Working Group 1	Cronbach Alpha Coefficient Working Group 2
Deciding on the Goal	.79	.68
Managing the Goal-Oriented Process	.81	.78
Full Scale	.73	.78

Reliability coefficients of each sub-scale obtained from Study Group 1 data vary between .79 and .81. The reliability coefficient of the entire scale is .73. Reliability coefficients obtained as a result of the analysis of Study Group 2 data are .68 and .78 for each sub-scale, while this value is .78 for the entire scale. These values obtained from both study groups indicate that the scale is reliable.

DISCUSSION, CONCLUSION and RECOMMENDATIONS

Humans, having a mental capacity and metacognitive skills, have a superior goal orientation capacity than primitive creatures and has the power to conceptualize goals and set long-term goals for the future (Locke, 1969). Therefore, people should identify what is beneficial for life wellbeing, set goals to achieve this, and determine strategies and tools to achieve them and act accordingly. The most important finding that emerged from hundreds of studies on goal setting is that individuals with

specific, difficult but attainable goals perform better than individuals having easy, not specific goal or no goals and have higher life satisfaction (Latham and Locke, 1991). Considering the importance of setting goals for human life, it can be said that the development of these skills in childhood is extremely important.

Children can develop many metacognitive skills, especially through the formal and informal learning experiences in primary school. In order to carry out studies aimed at developing a skill that children will need in all areas of their lives such as goal setting skills, one would be in need of measuring the level of children's skills in order to determine their development. In this context, the scale developed in this study to evaluate the goal setting levels of children, especially in primary education period will serve this purpose.

During the scale development process, data was obtained from two study groups. Data from the first group were collected in 2015 and from the other group in 2019. Validity and reliability analyses of the scale started with the first group and were repeated in the second study group. The initial results revealed that the scale supports the 2-factor structure. When the items in these structures were analysed, it was seen that one construct was related to deciding on goal and the other was related to managing the goal-oriented process. Analyses on data collected from the second study group in 2019 also showed that the scale preserves its two-factorial structure. Consequently, this study revealed that a "Goal Setting Skills Scale for Primary School Students (GSSS-PSS)", which consists of two subscales measuring skills related to "Deciding on the Goal" and "Managing the Goal Oriented Process", is a valid and reliable independent of time.

These dimensions in the scale are similar to the goal setting skills scale developed by Hansen and Larson (2002) for young people. This scale consists of two dimensions as decision making and following the goal process. In the goal setting questionnaire created by Gaumer Erickson, Soukup, Noonan McGurn (2016), it is striking that there are items for personal emotions, attitudes or characteristic behaviours as in the GSSS-PSS. However, in their questionnaire, there are five constructs, which are loyalty to goal, self-efficacy, goal specificity, goal conflict and autonomy. In the current study, it can be said that items in these five constructs seem to be placed under the two constructs of the GSSS-PSS. In addition, Goal Type Scale developed by Meenashki et al. (2013) to examine athletes' performance goals has two dimensions: "time-based goals" and "combination of mixed goals". These constructs include process, performance and outcome goals and short- and long-term goals sub-dimensions. When these dimensions and the items are examined, it can be observed that there are similarities in terms of the contents of the items of the GSSS-PSS.

The scale was created by considering the Goal Setting Theory developed by Locke and Latham in 1979 and the goal setting process introduced in this theory. However, there are theories each of which explains goal setting process differently. But all of them seem to describe a goal setting process as setting a goal, taking action, directing attention and action, evaluating the performance and gains that have arisen, and measuring satisfaction attained at the end of the process (Mavisu, 2010). In terms of this scope of goal setting theories, the two dimensions in the GSSS-PSS, "Deciding on the Goal" and "Managing the Goal-Oriented Process", correspond to determining a goal, taking action, directing action and attention dimensions. The scale's "Deciding on the Goal" dimension includes setting the goal, while the "Managing the Goal-Based Process" dimension includes the areas of taking action, directing action and attention. The evaluation of performance, gains and satisfaction is not included in the scale since it is related to the result part. In this regard, it can be said that when considering purpose and age range of the scale, the GSSS-PSS is limited to the first two steps of goal setting theory and the processes of setting the goal and managing the goal setting.

In the literature review, it has not been yet encountered a specific scale for goal orientation and goal-setting skills within the scope of Turkey. On the other hand, it is noticeable that the scale development studies on this subject are generally created for the academic goals in the school and classroom environment (Anderman & Midgley, 1997; Anderman &Young, 1994; Hicks, 1997; lliot &

McGregor, 2001; Kaplan & Maehr, 1999; Midgley & Urdan, 1995; Midgley et al., 1998; Ryan, Gheen, & Midgley, 1998) rather than the goal setting skills that cover the entire life of children. The dimensions of these scales are generally related to performance goals, learning goals, mastering goals, avoiding the goal.

The "Goal Setting Skills Scale for Primary School Students", developed in terms of the importance of the goals for human life, is capable of closing a gap in the field for determining and developing the goal setting skills of primary school students. Validity and reliability analyses results demonstrated that this scale is a valid and reliable tool regardless of time. The scale can be used for different purposes by teachers, school administrators and psychological counseling and guidance units. In particular, this scale can be used in further research investigating the relationship between students' academic achievement performance and goal setting skills. The scale can guide teachers in evaluating development of children as a whole in terms of academic, social and emotional aspects. Furthermore, guidance and psychological counselling units in schools can use this scale for determining the level of goal setting skills of students and offer practices to develop these skills through individual and group guidance activities. At the same time, teachers can develop strategies, methods and techniques so as to improve the goal setting skills of students in classroom by collaborating with teachers from different branches. Since the goal setting skills should be gained and evaluated at all educational levels, adaptation studies can be conducted for different grade levels. In addition, this scale can assist researchers in developing different assessment tools that can be administered to teachers and parents in order to evaluate children's goal-setting skills from different perspectives. Furthermore, researchers can use the scale to evaluate the effectiveness of programs designed to improve students' goal setting skills. In this way, the scale will serve one of its main goals.

Limitation of the study

The data collected in this study were limited to 120 people in the first participant group and 223 people in the second group of participants. The levels of the students participating in the study are from primary school 4th and 5th grades. If this scale is claimed to be used in different studies, after validity and reliability studies are performed, it can be used with the participants from higher or lower grades or from different socio-economic levels.

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